

THERMOMECHANICAL PROCESSING ROUTES IN COMPACT STRIP PRODUCTION OF HIGH-STRENGTH LOW-ALLOY STEEL

Abstract

Process for hot rolling of high-strength low-alloy steel cast in Compact Strip Production as a thin slab. The strain and temperature at initial roll stands where deformation occurs allows full recrystallization, and at latest roll stands where deformation occurs there is no recrystallization. Deformation is absent at strains and temperatures where partial recrystallization would occur, allowing increased recrystallization over conventional CSP rolling. The result may be beneficial for microalloyed high-strength low-alloy steel in permitting accurate ultrasonic testing of welds. The time allowed between deformation at passes through roll stands may be increased by eliminating deformation at one or more central roll stands. Combined with increased strain at the initial roll stands where the temperature of the steel is in the full recrystallization region, the process may result in a relatively fine and uni-

form austenite grain size.